

Verification Test Completed For Two Hydrogen Sulfide Monitors

The AMS Center has completed performance verification tests of two technologies that measure hydrogen sulfide (H₂S) concentrations in ambient air — the Teledyne-API Model 101E and the Horiba Instruments, Inc., APSA-360. Both technologies were tested at a swine finishing farm near Ames, Iowa, in collaboration with the U.S. Department of Agriculture's Natural Soil Tilth Laboratory and Applied Measurement Science.

The analyzers were operated at the test site for up to six weeks, during which time they continuously monitored H₂S concentrations in ambient air or in synthetic air samples. The analyzers were evaluated for accuracy, bias, precision, and linearity at H₂S concentrations up to 300 parts per billion (ppb). Additional performance

parameters included zero and span drift, response time, interference effects, comparability, data completeness, and operational factors. Additional information, including verification statements and reports, is available on the EPA's Environmental Technology Verification (ETV) Program's Web site (www.epa.gov/etv).



Technology: APSA-360
Company: Horiba Instruments, Inc.
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Irvine, CA 92614
Phone: 949-250-4811
Fax: 949-476-1293
Web site: www.hii.horiba.com/
E-mail: dick.bates@horiba.com



Technology: Model 101E
Company: Teledyne-API
Address: 3318 Highway 5, PMB 526
Douglasville, GA 30135
Phone: 770-949-9409
Fax: 770-949-9326
Web site: www.teledyne-api.com/
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Verified Tools for Continuous Monitoring of Nutrients Available

New technologies for the continuous monitoring of nutrient concentrations in wastewater offer advantages over the periodic analysis of grab or composite samples. For example, continuous nutrient monitors can measure nutrient concentrations at a greater frequency with results available within one hour instead of a day or more. Other advantages include decreased waste production and labor requirements for each measurement.

The performance of two continuous nutrient monitoring technologies has been verified by the AMS Center in collaboration with DuPont at an industrial wastewater treatment facility at DuPont's Spruance Plant in Richmond, Virginia. The Shimadzu Scientific Instruments, Inc., TNPC-4110(C) was verified for total nitrogen and total phosphorus. The Multi-Parameter Analyzer (MP-1) from ZAPS Technologies, Inc., was

verified for nitrate. Test results for the two nutrient monitoring technologies are available on the ETV Program's Web site (www.epa.gov/etv).



Technology: TNPC-4110(C)
Verified Nutrient: Total nitrogen, total phosphorus
Company: Shimadzu Scientific Instruments, Inc.
Address: 7102 Riverwood Drive
Columbia, MD 21046
Phone: 410-381-1227
Fax: 410-381-1222
Web site: www.ssi.shimadzu.com/
E-mail: RHClifford@Shimadzu.com

Technology: MP-1
Verified Nutrient: Nitrate
Company: ZAPS Technologies, Inc.
Address: 131 NW 4th Street, PO Box 401
Corvallis, OR 97330
Phone: 541-520-2663
Fax: 541-753-3467
Web site: www.zapstechnologies.com/
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The AMS Center, which is part of the U.S. Environmental Protection Agency's Environmental Technology Verification Program, verifies the performance of technologies that monitor for contaminants and natural species in air, water, and soil. ETV was established to accelerate the implementation of improved environmental technologies through third-party verification testing and reporting of the technologies' performance. The ETV process provides purchasers and permittees with an independent assessment of the technology they are buying or permitting and facilitates multi-state acceptance. For further information, contact Helen Latham at Battelle, 505 King Ave., Columbus, Ohio 43201-2693; Phone 614-424-4062; Fax 614-424-5601; E-mail lathamh@battelle.org.



Technology Field Day Held September 7

A Technology Field Day was conducted by the EPA's ETV Program on Wednesday, September 7, for the Advanced Monitoring Systems Center's verification test of dioxin emission monitoring systems. Approximately 50 individuals attended the event, including representatives from state agencies, industry, and the Department of Defense.

The field day was held at EPA's Research Triangle Park Campus and featured a presentation about the upcoming verification test of dioxin emission monitoring systems and a discussion of EPA procedures for the adoption and use of dioxin monitoring technologies.

Included were remarks from EPA and Battelle representatives, including Sally Gutierrez, director of EPA's National Risk Management Research Laboratory; Teresa Harten, EPA director of the ETV program; Dr. Ken Cowen, the verification test coordinator from Battelle, who described the verification test; and speakers on dioxin regulations and new monitoring technologies.

The four vendors participating in the verification test gave presentations about their technologies. They are Jurgen Reinmann, bm Becker Messtechnik gmbh; Thomas

Steiner, Monitoring Systems GmbH; Tom Onishi, IDX Technologies; and Dr. Brian Gullett, U.S. EPA/SRI International Team.

The verification test is supported by the EPA's Office of Research and Development, Office of Solid Waste and Emergency Response, Office of Air Quality Planning and Standards, the Chlorine Chemistry Council, and Battelle.

The dioxin emission monitoring systems are designed to replace manual stack sampling techniques used to quantify dioxins in flue gas which are labor intensive and expensive. Testing was conducted in September. Draft reports are expected by mid-December.

Upcoming Events

October

16-20 2005 Annual ASDWA Conference
Adam's Mark Hotel
St. Louis, MO.

29-Nov. 2 Water Environment Federation
78th Annual Technical Exhibition and Conference (WEFTEC)
Washington Convention Center, Washington, DC

30-Nov. 4 AIChE 2005 Annual Meeting, Cincinnati
Cincinnati Convention Center
Cincinnati, OH

Teresa Harten (left), ETV's program director, provided background information about the program and responded to questions about its beginning, successes, and growth. Visitors (right) discussed on-site technologies.

ETV Expands Program By Adding New ESTE

A new element—Environmental and Sustainable Technology Evaluations (ESTE)—has joined the ETV Program. ESTE's purpose is to expand ETV's ability to respond quickly and directly to meet EPA's need for credible performance information for innovative commercial-ready technologies to address high-risk environmental problems. ESTE's role is to maintain quality assurance, cost-sharing, and stakeholder involvement in ETV.

Five ESTE verifications were approved and are being planned. These verifications will address technologies for pesticide drift reduction, tracking hazardous wastes, animal wastes, resistant building materials, and fuel characteristics and emissions from biomass-fired boilers. For further information, go to the ETV Web site: <http://www.epa.gov/etv/etvoice/05-06.html>.

Two of the ESTE verifications will address technology needs identified by EPA's Environmental Technology Council (ETC). ETC's role is to enhance communication and coordination among all of EPA's technology activities.

Additional recommendations for ESTE verifications will be sought by EPA in early Fall 2005.